



Massachusetts  
Department  
*of*  
ENVIRONMENTAL  
PROTECTION

## **INDICATIVE PROJECT SUMMARIES**

### **Water Loss Prevention Grant Program**

**FFY 2005**

**Commonwealth of Massachusetts Executive Office of Environmental Affairs  
Stephen R. Pritchard, Secretary**

**Massachusetts Department of Environmental Protection  
Robert W. Golledge, Jr. Commissioner**

**Bureau of Resource Protection  
Glenn Haas, Acting Assistant Commissioner**

**Division of Municipal Services  
Steven J. McCurdy, Director**

**2006**

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**INDICATIVE PROJECT SUMMARIES**

**WATER LOSS PREVENTION GRANT PROGRAM**

**FFY 2005**

**Prepared by:  
Malcolm Harper  
&  
Gary Gonyea**

**Commonwealth of Massachusetts Executive Office of Environmental Affairs  
Stephen R. Pritchard, Secretary**

**Department of Environmental Protection  
Robert W. Golledge, Jr., Commissioner**

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Glenn Haas, Acting Assistant Commissioner**

**Division of Municipal Services  
Steven J. McCurdy, Director**

**2006**

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-01/WLP**

**PROJECT TITLE:** Easton Water Loss Prevention Grant Project

**INVESTIGATOR:** Town of Easton

**LOCATION:** Taunton River Basin

**DESCRIPTION:** This project will identify and reduce unaccounted for water loss from the Town of Easton drinking water works and distribution system. The Town has sources of supply that are located in a stressed subwatershed. The Town's goal is to reduce unaccounted for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss);
2. Conduct a comprehensive leak detection survey of water mains and appurtenances of the water distribution system. Establish a priority system to implement leak repairs;
3. Conduct Water Conservation Seminar for Town employees and other water departments within the Canoe River sub-basin;
4. Conduct a Public Outreach program to develop and print a water conservation pamphlet and book cover;
5. Prepare quarterly reports and other deliverables for submittal to the Department; and
6. Prepare a draft and a final project report.

**COST:** \$51,360

**FUNDING:** \$31,000 by the U.S. Environmental Protection Agency  
\$20,360 by the Town of Easton

**DURATION:** 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-02/WLP**

**PROJECT TITLE:** Salem Water Loss Prevention Grant Project

**INVESTIGATOR:** City of Salem

**LOCATION:** Ipswich River Basin

**DESCRIPTION:** This project will identify and reduce unaccounted for water loss from the City's drinking water works and distribution system. The City has sources of supply that are located in stressed subwatersheds. The City proposes to reduce its unaccounted for water loss to 10 percent or less in order to satisfy its Water Management Act Program permit requirements.

The City will quantify the water savings from project related activities in both gallons per year and an approximate dollar value.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss);
2. Conduct a comprehensive leak detection survey of water mains and appurtenances of the water distribution system network. Establish a priority system to implement leak repairs, develop district metering areas, analyze leakage measurement data, develop high priority target areas in an effort to improve effectiveness of leak detection program, access and tap into mains to install metering equipment;
3. Prepare quarterly reports and other deliverables for submittal to the Department; and
4. Prepare a draft and a final project report.

**COST:** \$55,000

**FUNDING:** \$40,000 by the U.S. Environmental Protection Agency  
\$15,000 by the City of Salem

**DURATION:** 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-03/WLP**

**PROJECT TITLE:** Hamilton Water Loss Prevention Grant Project

**INVESTIGATOR:** Town of Hamilton

**LOCATION:** Ipswich River Basin

**DESCRIPTION:** This project will identify and reduce unaccounted for water loss from the Town of Hamilton's drinking water works and distribution system, and reduce the amount of water withdrawal of their sources. Reducing the amount of water withdrawn from their sources will assist in alleviating stress on the Ipswich River basin.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss);
2. Conduct a comprehensive leak detection survey of water mains and appurtenances of the water distribution system network. Establish a priority system to implement leak repairs, develop district metering areas, analyze leakage measurement data, develop high priority target areas in an effort to improve effectiveness of leak detection program, access and tap into mains to install metering equipment;
3. Prepare quarterly reports and other deliverables for submittal to the Department; and
4. Prepare a draft and a final project report.

**COST:** \$43,000

**FUNDING:** \$31,000 by the U.S. Environmental Protection Agency  
\$12,000 by the Town of Hamilton

**DURATION:** 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-04/WLP**

**PROJECT TITLE:** Grafton Water Loss Prevention Grant Project

**INVESTIGATOR:** Grafton Water District

**LOCATION:** Blackstone River Watershed

**DESCRIPTION:** This project will consist of a water audit, leak detection survey, and implementation of a water conservation education and outreach program. The Grafton Water District commits to the repair of identified leaks in accordance with the current Water Management Act Permit requirements. The District will quantify the water savings from project related activities in both gallons per year and an approximate dollar value.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss);
2. Conduct a comprehensive leak detection survey of water mains and appurtenances of the water distribution system network. Establish a priority system to implement leak repairs, develop district metering areas, analyze leakage measurement data, develop high priority target areas in an effort to improve effectiveness of leak detection program, access and tap into mains to install metering equipment;
3. Prepare quarterly reports and other deliverables for submittal to the Department; and
4. Prepare a draft and a final project report.

**COST:** \$43,000

**FUNDING:** \$31,000 by the U.S. Environmental Protection Agency  
\$12,000 by the Grafton Water District

**DURATION:** 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-05/WLP**

PROJECT TITLE: Upton Water Loss Prevention Grant Project

INVESTIGATOR: Town of Upton

LOCATION: Blackstone River Basin

DESCRIPTION: This project will identify and reduce unaccounted for water loss from the Town of Upton's drinking water works and distribution system. The Town has sources of supply that are located in stressed subwatersheds within the Blackstone River Watershed. The Town proposes to reduce its unaccounted for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water loss;
2. Conduct a comprehensive leak detection survey for the 30 miles of water mains and appurtenances of the water distribution system network that may include source of supply transmission lines;
3. Purchase and install up to 100 replacement service meters;
4. Purchase and distribute water conservation pamphlets;
5. Prepare quarterly reports and other deliverables for submittal to the Department; and
6. Prepare a draft and a final project report.

COST: \$37,000

FUNDING: \$28,000 by the U.S. Environmental Protection Agency  
\$ 9,000 by the Town of Upton

DURATION: 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-06/WLP**

**PROJECT TITLE:** Georgetown Water Loss Prevention Grant Project

**INVESTIGATOR:** Town of Georgetown

**LOCATION:** Parker River Basin

**DESCRIPTION:** This project will identify and reduce unaccounted for water loss from the Town of Georgetown's drinking water works and distribution system. The Town has sources of supply that are located in a stressed subwatershed within the Parker River Watershed. The Town proposes to reduce its unaccounted for water loss to 10 percent or less in order to satisfy Water Management Act Program permit requirements.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss);
2. Conduct a comprehensive leak detection survey of water mains and appurtenances of the water distribution system network. Establish a priority system to implement leak repairs, develop district metering areas, analyze leakage measurement data, develop high priority target areas in an effort to improve effectiveness of leak detection program, access and tap into mains to install metering equipment;
3. Prepare quarterly reports and other deliverables for submittal to the Department; and
4. Prepare a draft and a final project report.

**COST:** \$43,000

**FUNDING:** \$31,000 by the U.S. Environmental Protection Agency  
\$12,000 by the Town of Georgetown

**DURATION:** 2006-2007



**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-07/WLP**

**PROJECT TITLE:** North Attleborough Water Loss Prevention Grant Project

**INVESTIGATOR:** Town of North Attleborough

**LOCATION:** Blackstone and Ten Mile River Basins

**DESCRIPTION:** This project will identify and reduce unaccounted for water loss from the Town of North Attleborough's drinking water works and distribution system. The Town has sources of supply that are located within the Blackstone and Ten Mile River Watersheds. The Town is attempting to reduce its unaccounted for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss);
2. Develop and implement a Water Conservation Plan;
3. Purchase and install 100 remote read meter adapters for service meters;
4. Prepare quarterly reports and other deliverables for submittal to the Department; and
5. Prepare a draft and a final project report.

**COST:** \$47,000

**FUNDING:** \$37,000 by the U.S. Environmental Protection Agency  
\$10,000 by the Town of North Attleborough

**DURATION:** 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-08/WLP**

**PROJECT TITLE:** Southbridge Water Loss Prevention Grant Project

**INVESTIGATOR:** Town of Southbridge

**LOCATION:** Quinebaug River Basin

**DESCRIPTION:** This project will identify and reduce unaccounted for water loss from the Town of Southbridge drinking water works and distribution systems. The Town has sources of supply that are located within the Quinebaug River Watershed. The Town is attempting to reduce its unaccounted for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss);
2. Conduct a comprehensive leak detection survey for 75 miles of water mains and appurtenances of the water distribution system network. Establish a priority system to implement leak repairs, develop district metering areas, analyze leakage measurement data, develop high priority target areas in an effort to improve effectiveness of leak detection program, access and tap into mains to install metering equipment;
3. Prepare quarterly reports and other deliverables for submittal to the Department; and
4. Prepare a draft and a final project report.

**COST:** \$34,117

**FUNDING:** \$25,000 by the U.S. Environmental Protection Agency  
\$ 9,117 by the Town of Southbridge

**DURATION:** 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-09/WLP**

**PROJECT TITLE:** Gloucester Water Loss Prevention Grant Project

**INVESTIGATOR:** City of Gloucester

**LOCATION:** North Coastal Basin

**DESCRIPTION:** This project will identify and reduce unaccounted for water loss from the City of Gloucester's drinking water works and distribution system. The City's goal is to reduce its unaccounted for water loss to 10 percent or less.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss);
2. Conduct a comprehensive leak detection survey of water mains and appurtenances of the water distribution system network. Establish a priority system to implement leak repairs, develop district metering areas, analyze leakage measurement data, develop high priority target areas in an effort to improve effectiveness of leak detection program, access and tap into mains to install metering equipment;
3. Prepare quarterly reports and other deliverables for submittal to the Department; and
4. Prepare a draft and a final project report.

**COST:** \$52,000

**FUNDING:** \$38,000 by the U.S. Environmental Protection Agency  
\$14,000 by the City of Gloucester

**DURATION:** 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-10/WLP**

PROJECT TITLE: Rockport Water Loss Prevention Grant Project

INVESTIGATOR: Town of Rockport Water District

LOCATION: North Coastal Basin

DESCRIPTION: This project will identify and reduce unaccounted for water loss from the Town of Rockport's Water District drinking water works and distribution system. The Town proposes to reduce its unaccounted for water loss to 10 percent or less in order to satisfy Water Management Act Program permit requirements.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss);
2. Conduct a comprehensive leak detection survey of water mains and appurtenances of the water distribution system network. Establish a priority system to implement leak repairs, develop district metering areas, analyze leakage measurement data, develop high priority target areas in an effort to improve effectiveness of leak detection program, access and tap into mains to install metering equipment;
3. Prepare quarterly reports and other deliverables for submittal to the Department; and
4. Prepare a draft and a final project report

COST: \$50,000

FUNDING: \$36,000 by the U.S. Environmental Protection Agency  
\$14,000 by the Town of Rockport

DURATION: 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-11/WLP**

PROJECT TITLE: Mattapoisett Water Loss Prevention Grant Project

INVESTIGATOR: Town of Mattapoisett

LOCATION: Buzzards Bay Basin

DESCRIPTION: This project will identify and reduce unaccounted for water loss from the Town of Mattapoisett's drinking water works and distribution system. The Town proposes to reduce its unaccounted for water loss to 10 percent or less in order to satisfy Water Management Act Program permit requirements.

Specific tasks include:

1. Conduct a water audit to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss);
2. Conduct a leak detection survey for 55 miles of water mains and appurtenances of the water distribution system network. Establish a priority system to implement leak repairs;
3. Develop and implement a Water Conservation Plan;
4. Prepare quarterly reports and other deliverables for submittal to the Department; and
5. Prepare a draft and final project report..

COST: \$47,000

FUNDING: \$37,000 by the U.S. Environmental Protection Agency  
\$10,000 by the Town of Mattapoisett

DURATION: 2006-2007

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER LOSS PREVENTION PROJECT 05-12/WLP**

PROJECT TITLE: Ipswich Water Loss Prevention Grant Project

INVESTIGATOR: Town of Ipswich

LOCATION: Ipswich and Parker River Basins

DESCRIPTION: This project will identify and reduce unaccounted for water loss from the Town of Ipswich's drinking water works and distribution systems. The Town of Ipswich commits to the repair of identified leaks in accordance with their respective current Water Management Act Permit requirements.

Specific tasks include:

1. Conduct a water audit for the Town of Ipswich to balance the volume of drinking water produced with the volume billed and account for the remaining water (loss);
2. Conduct a comprehensive leak detection survey of water mains and appurtenances of the water distribution system network. Establish a priority system to implement leak repairs, develop district metering areas, analyze leakage measurement data, develop high priority target areas in an effort to improve effectiveness of leak detection program, access and tap into mains to install metering equipment;
3. Prepare quarterly reports and other deliverables for submittal to the Department; and
4. Prepare a draft and a final project report.

COST: \$46,000

FUNDING: \$35,000 by the U.S. Environmental Protection Agency  
\$11,000 by the Town of Ipswich

DURATION: 2006-2007